

Department of Defense Project Manager - Mobile Electric Power



**Fall
Technical and Marketing
Conference 2005**

Mr. Bob Szerszynski
DOD Project Manager - Mobile Electric Power



Presentation Outline



PM MEP Reorganization



Current Programs



Future Programs



Iraqi Freedom Lessons Learned



Hurricane Katrina Relief Support



Questions & Feedback



MEP Reorganization

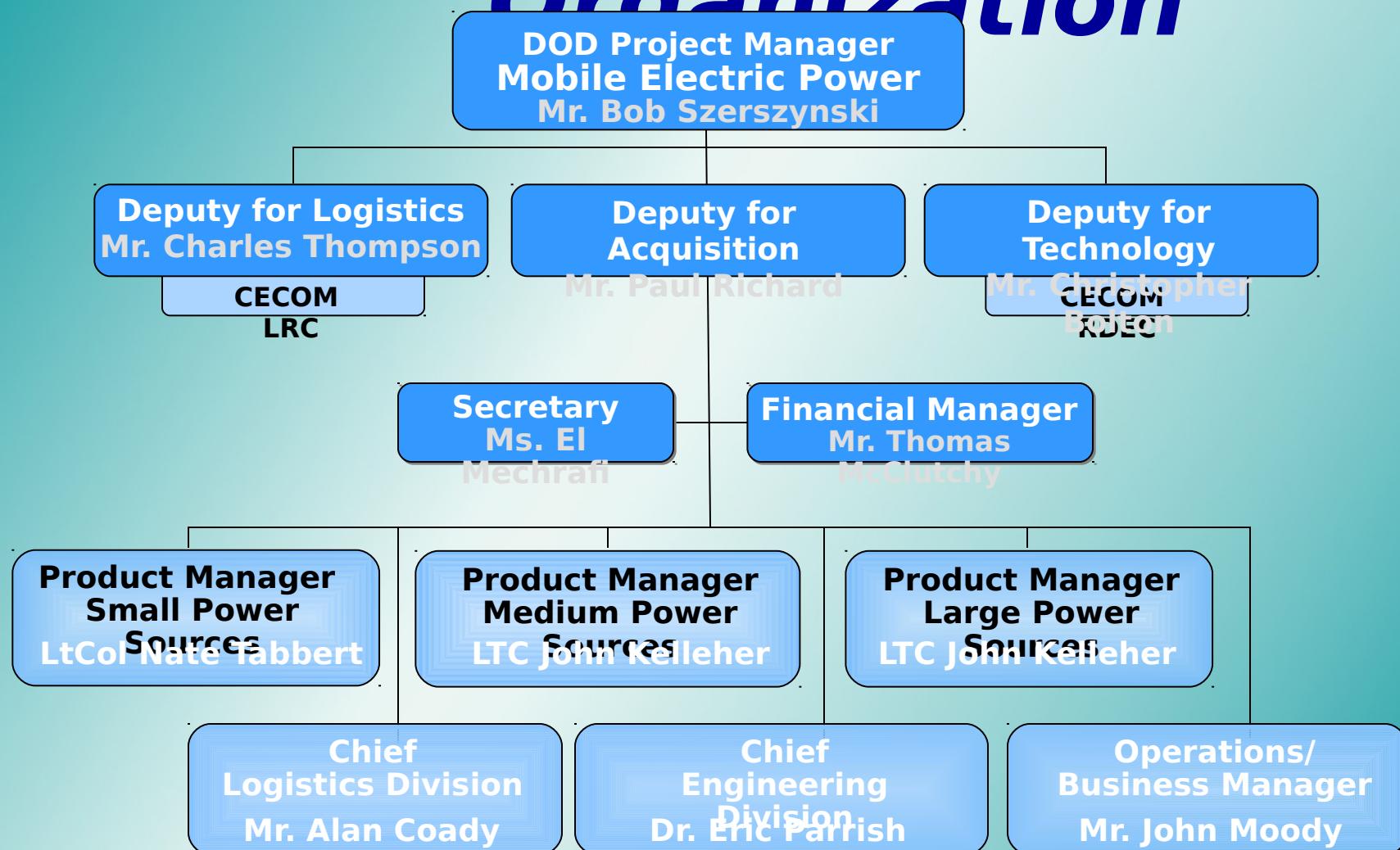
- ◆ Effective July 2005
- ◆ Project Manager Combat Systems Support (PM CSS)
Deactivated
- ◆ PM MEP Transferred from
**Program Executive Office, Combat Support and
Combat Service Support (PEO CS&CSS)**
to
**Program Executive Office, Command, Control
and Communications, Tactical (PEO C3T),
Fort Monmouth, NJ**
- ◆ Product Manager, Test, Measurement, and Diagnostic
Equipment (PM TMDE) and
Product Manager, Sets, Kits, Outfits, and Tools (PM SKOT)
remained under PEO CS&CSS
- ◆ PM MEP Assigned Responsibility for
Environmental Control Units (ECU)





PM MEP

Organization





DOD Project Manager Mobile Electric Power **Mission**

Provide a Modernized Department of Defense Standard Family of Mobile Electric Power Generating Sources for All Services For Maximum DOD Component Use.

Accomplish this Mission Through a Coordinated Inter-Service Effort to Develop, Acquire, and Support Mobile Electric Power Sources from Small, 0.5kW Manportable Generators to Large, 920kW and Greater Prime Power Systems.

Ref: DODD 4120.11

Support for the Soldier, Sailor, Airman, Marine

Army Regulation 700-101
AFJI 63-110
NAVFACINST 4120.12
MCO 11310.8C
DLAI 4120.11

JOP

Joint Operating Procedures Management and Standardization of Mobile Electric Power Generating Sources





Current Programs

R & D

AMMPS
Fermont

Advanced Medium Mobile Power Sources

IECU

Improved Environmental Control Unit

Onan/Cummins and

TBD

Production

2kW MTG
Military Tactical Generator

Dewey Electronics

3kW TQG
Tactical Quiet Generator

Fermont

5kW 28VDC APU
Auxiliary Power Unit

Goodman-Ball

10kW Shelter-mounted APU
Auxiliary Power unit

Chenega

5kW, 10kW, 15kW TQG
Tactical Quiet Generator

Fermont

30kW & 60kW TQG
Tactical Quiet Generator

MCII

100kW & 200kW TQG
Tactical Quiet Generator

Fermont

DPGDS

Radian

Deployable Power Generation & Distribution System

DISE

UNICOR

*Distribution Illumination System Electric
Industries*

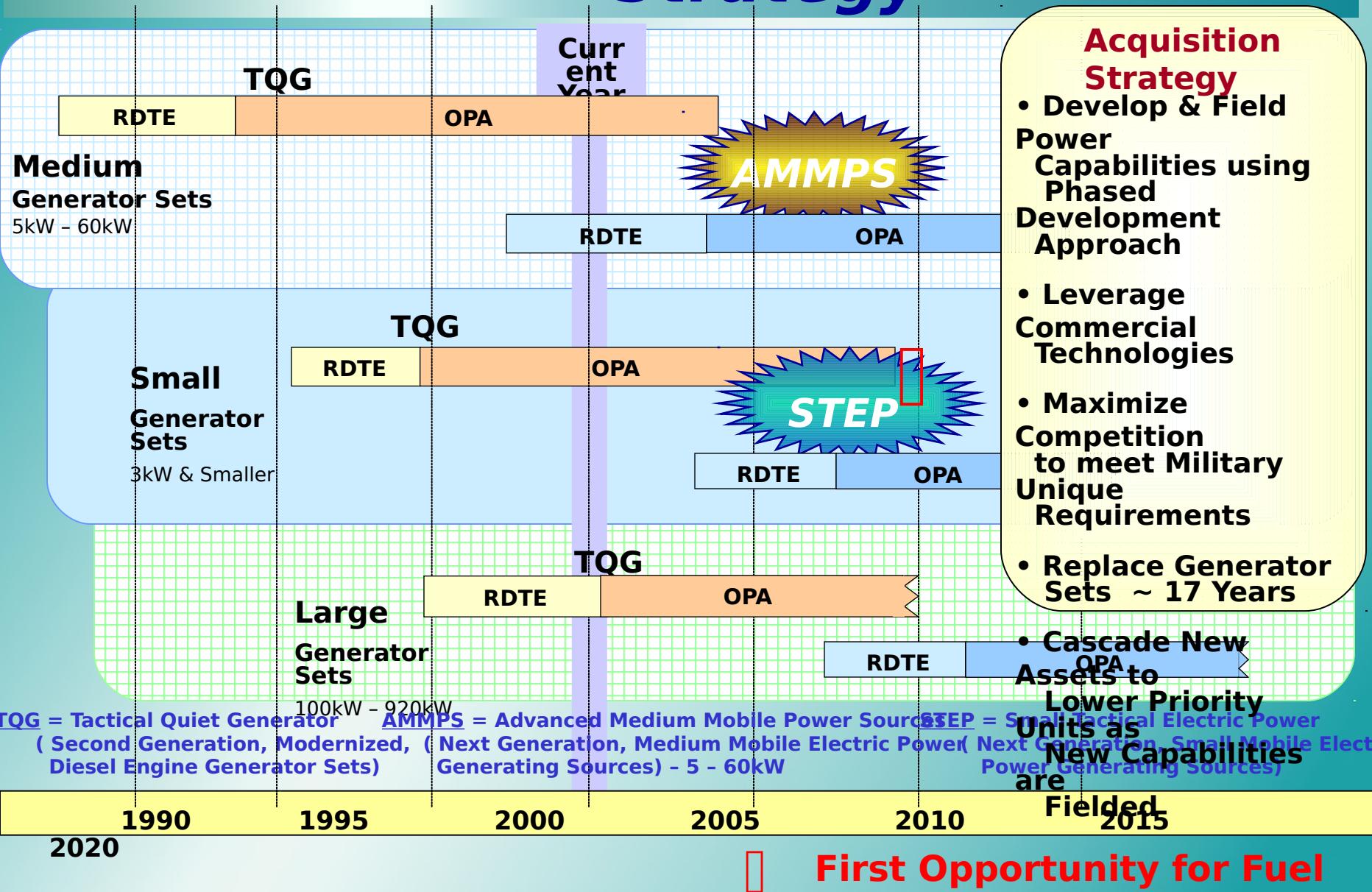
Federal Prison



Near Term Business Opportunities

- **60k BTU Improved Environmental Control Unit (IECU)**
 - **Solicitation Released 14 July 2005**
 - **Proposals Due 4 October 2005**
- **5kW 28VDC Auxiliary Power Unit (APU)**
 - **Solicitation for Reprocurement 3QtrFY06**
- **10kW Shelter Mounted APU**
 - **Solicitation for Reprocurement 3QtrFY06**

Power Source Modernization Strategy





AMMPS Program

Advanced Medium Mobile Power Sources

Phase 0 *Solicitation*

m
Phase 0: Request for Proposals
Contractors submit proposals
FY04

Phase I "Cost-Plus" *Prototypes and Testing*

Phase I: Award to up to 3 contractors
Build Prototypes
Prototype Testing
Test Reports
Evaluation Process
FY05 -
20FY06

Phase II "Cost-Plus" *Pre-Production Units* and Testing

Phase II: Exercise Option to Single Contractor
Pre-Production Unit Build
PPQT (Pre-Production Qualification Tests)
3QFY06 -

Phase III "Fixed Price" *Production*

Phase III: Exercise Option FY08
First Production
FUE (First Unit FY09
Equipped)

Small Tactical Electric Power (STEP)



Stirling Engine

Technical/Performance

Power Output	0.5kW - 3.0kW
Hot & Basic Climate	-50°F to +135°F
Altitude Performance	Full rating @ 4,000ft, 95°F
	Operate up to 10,000 ft @ 95°F
Weight	142-293 lbs
Fuel Consumption	0.24-0.28 gph
Fuel	Diesel/JP-8
Noise	67- 72 dBA @ 7m (Silent Watch Capability)
Frequency	50/60/400 Hz/ DC ?
Reliability	750-1,250 hours
MTBEFF₁	



Microturbine

Objectives 2005

- Conduct Paper Study for Militarization of Stirling and Microturbine Technology
- Continue Testing of Procured Systems and Developed Power Electronics Module

Program Schedule Goals

- 2006 - Release Draft Specification
- 2007 - Release Solicitation



Update to March 05 EGSA



Minutes Committee Minutes

Committee Name: GOVERNMENT RELATIONS

Date and Time: March 21, 2005 1:00-4:00

Topic	Discussion	
Conclusions Presentation by Ms. Kelly Alexander, Deputy Project Manager and Technical Director - US Army Project Manager Mobile Electric Power Office located at Fort Belvoir, VA.	Discussed the following: Overview of the Army Program Office Discussed plans and programs including: <u>Future</u> STEP Industry Day Sep/Oct 05 AMMPS Rebuy ~ 08/09 PMDS - Spec Available ~ Oct 05	Army plans to have an industry day in October to discuss the <u>next generation</u> of Small Tactical Electric Power 2 and 3kw generator sets. (STEP) The Army is testing a new Power Distribution Management System and is currently looking for commercially available sources of supply. (PDMS)

Updated STEP Information:

Industry Day

4QtrFY07

Award Phase I SDD/MS B 2QtrFY09

Award Phase II (Down Select)

1QtrFY10

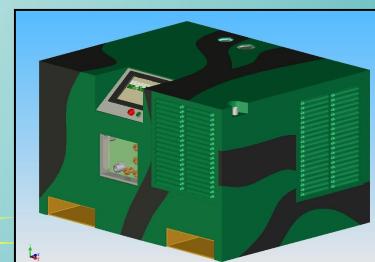
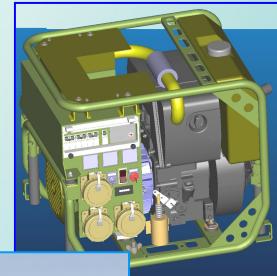
Milestone C (Production) 4QtrFY11



Future Programs/Technologies

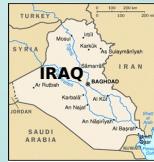
- Advanced High Speed Diesel Engines
- Permanent Magnet Alternators
- Advanced Environmental Control Systems
- Combined Power/ECU Systems
- Power Electronics & Digital Controls
- Composite Materials & Alloys
- Diagnostic & Prognostics
- Microturbines
- Battery technology
- Stirling Engines
- Direct Energy Conversion
 - Thermophotovoltaics

Technologies Must Satisfy Operational Needs



Project Manager Mobile Electric Power

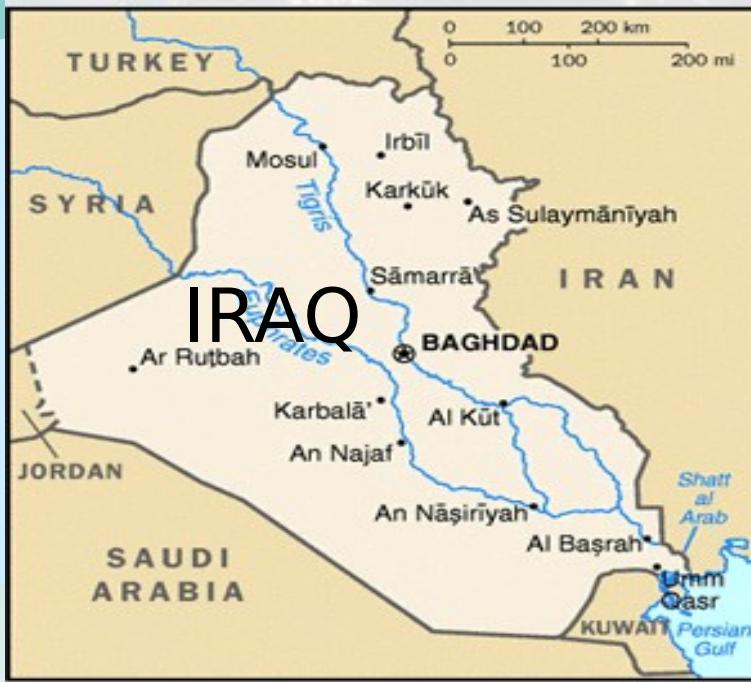
OIF
Operatio
n
Iraqi
Freedom



Observations

**OIF
Operation
Iraqi
Freedom**

**Observatio
ns**



**Department of
Defense
Project Manager
Mobile Electric Power**
**Product Manager PM MER Small Power
Sources**
**Product Manager Medium Power
Sources Product Manager Large
Power Sources**

Harsh Environmental Conditions





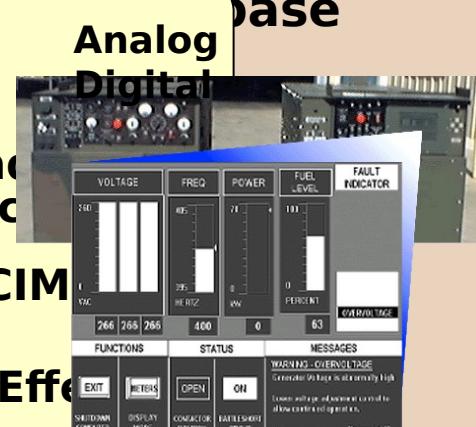
Iraq/Afghanistan Lessons Learned

- Power distribution - training/equipment/procedures
- High temperature operation critical
- Sand/dust impacts
- Solar loading (especially on displays)
- Preventative maintenance paramount (but not being done)
- Inadequate parts support -- sluggish
- Requirement for systems assessments

Environmental Impacts & MEP Actions

- TQG Master Switch - Developed Dust Proof Form, Fit, and Function Replacement Master Switch
- TQG Computer Interface Module (CIM) Overheating Failures Resolved by Operational Techniques to Reduce Effect

of Incoming Solar Radiation (Insolation) CI





Hurricane Katrina Relief Support

Hardware Provided by PM MEP

- 1 840kW DPGD
 - 1 60kW TQG
 - 10 10kW TQGs
- Camp Shelby and Hammond Airfield

PEO C3T
Forward Deployed Task Force

PEO C3T Personnel
One MEP Representative



12/09/2005



13/09/2005

Generator Sets at Camp Shelby



Early Katrina Cloud Formation

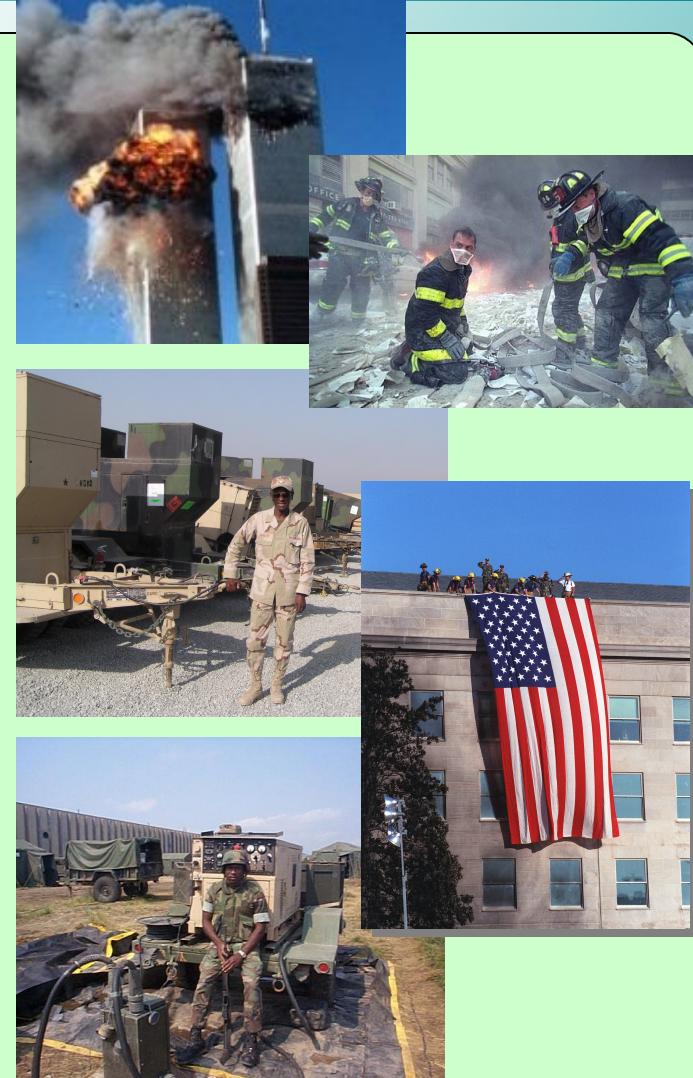




Government - Industry Team

Every member of the Government - Industry Team is vital to the timely and successful provision of Tactical Electric Power to our Soldiers, Sailors, Airmen, and Marines as well as to the survivors of manmade and natural disasters. No matter how large or small your part, YOU are vitally important.

America's Power Team



PM-MEP Home Page

- DoD Directive 4120.11
- TQG Technical Data
- "What's New"
- Safety of Use Messages
- Organization and Points of Contact
- DoD Generator Master Plan
- Manuals, Tools, PLL/A
- PS Magazine Articles
- References
(i.e. MIL STDs, ARs, etc.)

MORE !



**[www.pm-
mep.army.mil](http://www.pm-mep.army.mil)**

**Comments / Recommendations
Solicited**



DoD Project Manager Mobile Electric Power Information / Points of Contact

Phones

Project Management Office

DSN: 654-3162

COM: (703) 704-
3162

FAX (703) 704-
3257



Mailing Address

Project Management Office

Project Manager -
Mobile Electric
Power
10205 Burbeck Road
Fort Belvoir, VA 22060-
5863



E-mail Addresses

Mr. Szerszynski:

bob.szerszynski@belvoir.army.mil

Project Manager - Mobile Electric Power

Mr. Richard

paul.richard@belvoir.army.mil

Deputy PM for Acquisition

Mr. Thompson

cthompson@belvoir.army.mil

Deputy PM for Logistics

Mr. Bolton

christopher.bolton@us.army.mil

Deputy PM for Technology

LtCol Tabbert:

nate.tabbert@belvoir.army.mil

Product Manager (Small Generator Sets)

LTC Kelleher

john.kelleher@belvoir.army.mil

Product Manager (Medium Generator Sets)

LTC Kelleher

john.kelleher@belvoir.army.mil

Product Manager (Large Generator Sets)



www.pm-mep.army.mil

Operations/Business Manager

Mr. Coady

Jul 05